

Work Order ID 85139

June-04-12 1:26:04 PM

85139

Page 1

Item ID: D350-636-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Skidtube LH

Stop

NS2

Start Date: 04/06/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/04

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								
100		0.00							

100

DOCUMENT CONTROL

DC

Document Control

Memo

0.00

Photocopy blue file and type labels per PPP D350-636-011 CHG 006

DAS 16
16
JB

for MLJ 12-7-24

B85139

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item Name: Skidtube LH

Start Date: 04/06/2012 Start Qty: 1.00

Accept

N900040100

Setup

Start

NS1

Stop

NS2

Required Date: 18/06/2012 Req'd Qty: 1.00

1

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 *110*	Skidtubes	0.00							

Skidtubes

Memo

0.00

1- Pick D2600-3 Bent

*BE 12/06/25*2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside
AFT end per dwg D2750*BE 12/06/25*3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500",
debur.4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade
fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

*BE 12/06/25*6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details).Drill using drill
Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE8-Open up holes for Detail B to 0.375" (4 holes per side)and blade fitting
location holes to 0.500" (total of 4 holes per side) as per dwg D2750 .Open up
holes for ground handling and detail C to 0.500" (8 holes per side)9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to
0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

*> BE 12/06/28**BE 12/06/25**3 BE 12/06/28**BB 12/06/28**BE 12/06/28*

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1

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
						Stop	*NR2*
	QC:	Date:	SPC (Y/N):	Date:			

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch: <u>M22130</u>								
	12-Grind welds flush as per Dwg D2750								

BE 12/06/26
BE 12/06/26

120

120

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

517164128

0.00

130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

517164128

0.00

W/O:		WORK ORDER CHANGES							
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Required Date: 18/06/2012 **Req'd Otv:** 1.00 ***1***

Cust Item ID:

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____
QC: _____ **Date:** _____

Date:

Run

Start

NR1

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* HandFinish	Chemical Conversion Coat per QSI005 4.1	0.00				1	76	12-6-27	
	Memo	0.00							

150 QC7-Inspect Chemical Conversion Coat 0.00
QC Memo 0.0
Quality Control

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Stop

NS2Start Date: 04/06/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.								
	2-Open up holes of Detail B to 0.750" (total of 4 holes per side) as per dwg D2750.								
	3- Open float hole to 0.500" (4 per side)								
	4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8)								
	5-Deburr and blow out all chips from inside of tube								
	6- Prepare tube for welding, remove alodine as required.								
	7-Bond web D2739 in place as per QSI 015 A/R Sikaflex-291 batch: <u>M121409</u> exp. date: <u>13-4-12</u>								
	8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 8) A/R Aluminum Rod batch: <u>M122130</u>								
	9- At section AJ-AJ drill out x-bolt spacer to 0.404"								
	10-Grind welds flush as per Dwg D2750								

BB 12/07/03

> CF 12-7-3

> GE 12-07-04

DP 12-7-9

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750								
	12-Deburr holes								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170 QC	Memo	0.00							
Quality Control									
180	QC5- Inspect part completeness to step on W/O	0.00							
180 QC	Memo	0.00							
Quality Control									

12-2-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Revision ID:

Item Name: Skidtube LH

Stop

NS2Start Date: 04/06/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* HandFinish	Pressure Wash per QSI005 4.3	0.00							
Hand Finishing	Memo	0.00							
	Re-alodine tube as per QSI 005 section 4.1.2. I do not acid etch.								
200 *200* Powdercoat	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powder Coating	Memo	10'30 0.00 F							
	START TIME: 10'30								
	OVEN TEMPERATURE: 320								
	FINISH TIME: 11'00								
210 *210* QC	QC3- Inspect Part Finish	0.00							
Quality Control	Memo	0.00							
	Inspect for foreign object per QSI 024								

WIA1841

210

210

QC

Quality Control

1 NS 12-7-10

m-f
12/07/10

IX φ

161 d MU a/07/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Item Name: Skidtube LH

Start Date: 04/06/2012 Start Qty: 1.00 *1*

Required Date: 18/06/2012 Req'd Qty: 1.00 *1*

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:
	QC:	Date:	SPC (Y/N):	Date:

Sequence ID/ Work Center ID	Operation Description
220 *220* HandFinish Hand Finishing	HandFinishing Memo ✓ 1- Install inserts as per Dwg D2750

230	0.00
-----	------

230 HandFinish Hand Finishing	HandFinishing Memo ✓ 1-Inspect for Foreign Objects - 2-Spray inside of tube with "LPS-3" batch: _____ - 3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750 - SIKA FLEX 241 BATCH: <u>1112136</u> EXP DATE: <u>10/03</u> ✓ 4-assemble o-ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: <u>11110308</u> ✓ 5-Coat all exposed fasteners with "LPS Procyon" batch: <u>11114596</u>
---------------------------------------	--

85139

Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Run Start

NR1

Stop

NR2

Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Int'l of Mnlodly

Int'l of Mnlodly

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 85139

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85139

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N900040100

Setup

Start

NS1

Revision ID:

Item Name: Skidtube LH

Stop

NS2

Start Date: 04/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 18/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
						Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC5- Inspect part completeness to step on W/O	0.00	S 11/07/12						

240
QC
Quality Control

250	Pick Kit	0.00							
-----	----------	------	--	--	--	--	--	--	--

250
Packaging
Packaging

260	QC4- 100% Inspect kits for completeness	0.00	DAS 16 17/07/26						
-----	---	------	-----------------------	--	--	--	--	--	--

260
QC
Quality Control

Memo
*****ensure antiseize is on AN8C21A bolts*****

W/O:		WORK ORDER CHANGES					
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Item Name: Skidtube LH

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Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270 *270* Packaging	Packaging	0.00							<i>(X)</i> <i>SP</i>
	Memo	0.00							<i>12-726</i>
	Package as per PPP D350-636-011								
280 *280* QC	QC21- Final Inspection - Work Order Release	0.00							<i>12/1/30/08</i>
	Memo	0.00							
	Quality Control								

*Rev I**m**12-07-27*

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

Page 1

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Comments:

IPP Rev:I 02.09.25 Rearranged procedure steps KJ
 IPP Rev:J 06-03-23 As per Rev D JLM
 IPP Rev:K 06-07.13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
 IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:ec
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
 IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verf:EC IPP Rev:P 10.06.22 revise
 seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3492-1		Manufactured	No		230	Each	257.0000	8	8	**		Jul 12 07/11	
---------	--	--------------	----	--	-----	------	----------	---	---	----	--	--------------	--

D3492-1

Plug

<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>
FP002		242	
69531		8	
74444		2	
76235		4	
83259		228	
FP-A		15	x8
83098		15	

D3492-3		Manufactured	No		230	Each	167.0000	8	8	**		Jul 12 04/11	
---------	--	--------------	----	--	-----	------	----------	---	---	----	--	--------------	--

D3492-3

Plug

<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>
FP-A		167	
81967		5	
83099		40	
83529		122	x8

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85139
D350-636-011

Start Date: 04/06/2012**Required Date:** 18/06/2012**Start Qty:** 1.00**Required Qty:** 1.00

NAS1611-010

Purchased

No

230

Each

188.0000

8

8

**

XL 11/03/11

NAS1611-010

O-RING

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	188	1122151
110915	14	XG
117460	8	
118077	1	
118612	3	
119438	47	
121259	2	
121415	4	
121584	59	
121723	50	

NAS1149D0863J

Purchased

No

250

Each

251.0000

2

2

✓

JB 12/07/24

NAS1149D0863J

WASHER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST298	251	
118078	34	
119307	17	
120308	100	120308
121556	100	

D2744

Manufactured

No

110

Each

35.0000

1

1

**

BE 12/06/26

D2744

Cap

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	35	
62715	1	
78900	3	
83412	31	/

W/O:		WORK ORDER CHANGES					
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D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110 Each

29.0000

1 1

**

D2600-3-BENT

Extrusion Bent

BE12/06/25

Location	Loc Qty	Loc Code
LG	29	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
81330	4	
83305	1	
83442	13	/

D2743

Manufactured No

160 Each

296.0000

8 8

**

D2743

Crossbolt Spacer

BE12/06/25 0704

Location	Loc Qty	Loc Code
LG	222	
81965	55	
83262	167	B
LG001	74	
67766	4	
68251	3	
73403	64	
74445	1	
79517	2	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 4

Work Order ID: 85139

85139
D350-636-011

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160

Each

13.0000

1

1

**

①

CF 12-A-3

D2739

350 I Beam

B85486

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	13	
72155	1	
81508	1	
83447	4	
83448	5	
83548	2	

D3490-3

Manufactured No

160

Each

46.0000

4

4

**

B612/07/04

D3490-3

Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	46	
83313	46	

D3490-1

Manufactured No

160

Each

45.0000

4

4

**

B612/07/04

D3490-1

Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	2	
81976	2	
LG001	43	
62450	2	
74875	4	
77042	3	
83269	34	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 5

Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

220

Each

781.0000

38

38

**

M

110711

AI S4-1032-225

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST281	758	X1122290
108696	146	X38
110768	62	
118386	55	
118966	68	
121269	427	
ST282	23	
120410	10	
120451	13	

D3793-3

Manufactured

No

230

Each

28.0000

1

1

**

M 110711

D3793-3

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	28	
83394	16	Y1
83901	12	

AN8C35A

Purchased

No

230

Each

68.0000

1

1

**

M 110511

AN8C35A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	67	
115960	1	
118286	16	X1
121275	50	
ST346	1	
114442	0	
115188	0	
115960	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 6

Work Order ID: 85139**Parent Item:** D350-636-011**Parent Item Name:** Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012**Required Date:** 18/06/2012**Start Qty:** 1.00**Required Qty:** 1.00

D3793-1

Manufactured No

230

Each

28.0000

1

1

**

Al 12/07/11

D3793-1

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	28	
82171	2	
<u>83393</u>	13	X1
83903	13	

D3488-041

Manufactured No

230

Each

9.0000

1

1

**

Al 12/07/11

D3488-041

Blade Fitting Assembly, LH

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	9	1385807
61689	1	
82271	8	

D3794-3

Manufactured No

230

Each

23.0000

1

1

**

Al 12/07/11

D3794-3

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	21	
<u>83396</u>	21	X1
FP002	2	
74530	2	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 85139***85139***
D350-636-011**Parent Item:** D350-636-011**Parent Item Name:** Skidtube LH**Start Date:** 04/06/2012**Required Date:** 18/06/2012**Start Qty:** 1.00**Required Qty:** 1.00

AN6C44A

Purchased

No

230

Each

86.0000

4

4

**

M1 h10716

AN6C44A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	2	
103964	2	
ST343	84	
121013	11	
121167	13	
<u>121440</u>	50	
121689	10	

MS21083C8

Purchased

No

230

Each

81.0000

1

1

**

M1 h10716

MS21083C8

NUT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
304	75	
<u>121185</u>	29	
121349	46	
FP002	1	
115884	1	
ST303	4	
115884	0	
118077	1	
119309	2	
119638	1	
ST304	1	
121524	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-25	Manufactured	No	230	Each	28.0000	1	1	**	<i>M n1071</i>
----------	--------------	----	-----	------	---------	---	---	----	----------------

D3536-25

Gasket

Location	Loc Qty	Loc Code
FP	28	
83391	12	
83900	16	

D3631-1	Manufactured	No	230	Each	347.0000	8	8	**	<i>M n1071</i>
---------	--------------	----	-----	------	----------	---	---	----	----------------

D3631-1

Washer

Location	Loc Qty	Loc Code
FG	332	
81874	2	
83588	330	
ST072	15	
68062	2	
75548	13	

D3791-1	Manufactured	No	230	Each	17.0000	1	1	**	<i>M n1071</i>
---------	--------------	----	-----	------	---------	---	---	----	----------------

D3791-1

Wearplate

Location	Loc Qty	Loc Code
FP002	17	
62239	2	
83392	15	

AN960C10L	NAS1149C0332	Purchased	No	230	Each	0.0000	38	38	<i>M1122063 ** (X38) M n1071</i>
-----------	--------------	-----------	----	-----	------	--------	----	----	----------------------------------

*AN960C10L * X
washer

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 9

Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230

Each

122.0000

8

8

**

ML

11/07/11

D2745

Bushing

Location	Loc Qty	Loc Code
FP	6	
79518	6	
FP001	116	
69529	1	
76142	1	
<u>83260</u>	114	

AN3C5A

Purchased No

230

Each

1,302.000

34

34

**

ML

11/07/11

AN3C5A

Bolt

Location	Loc Qty	Loc Code
FP001	7	
115835	7	
ST350	1295	
116419	28	
117343	13	
117764	7	
117872	2	
119749	23	
120423	28	
121068	12	
<u>121255</u>	500	X38
121444	182	
121708	500	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 10

Work Order ID: 85139**Parent Item:** D350-636-011**Parent Item Name:** Skidtube LH***85139***
D350-636-011**Start Date:** 04/06/2012**Required Date:** 18/06/2012**Start Qty:** 1.00**Required Qty:** 1.00

D3537-1

Manufactured

No

230

Each

83.0000

3

3

**

ML 110211

D3537-1

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	10	
79833	10	B88256 X3
FP002	73	
69817	5	
81360	14	
81362	19	
83254	1	
83255	3	
84091	31	

NAS1149C0832R

Purchased

No

230

Each

257.0000

1

1

**

ML 110211

NAS1149C0832R

WASHER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST297	257	
114915	257	✓1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

451.0000

4

4

**

HL u10314

AN3C6A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP001	1	
-------	---	--

111982	1	
--------	---	--

ST351	450	
-------	-----	--

111982	2	
--------	---	--

116419	23	
--------	----	--

116549	2	
--------	---	--

116704	12	
--------	----	--

117619	10	
--------	----	--

117688	1	
--------	---	--

117872	5	
--------	---	--

118422	13	
--------	----	--

119449	21	
--------	----	--

120423	3	
--------	---	--

120693	158	
--------	-----	--

<u>121682</u>	200	
---------------	-----	--

X4

NAS1611-013

Purchased

No

230

Each

361.0000

8

8

**

HL u10314

NAS1611-013

O-RING

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP001	361	
-------	-----	--

116582	5	
--------	---	--

117291	2	
--------	---	--

117887	53	
--------	----	--

119623	36	
--------	----	--

121584	15	
--------	----	--

<u>121825</u>	200	
---------------	-----	--

<u>121826</u>	50	
---------------	----	--

X6

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

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Page 12

Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-25	Manufactured	No	230	Each	34.0000	1	1	**	<i>MU 110210</i>
----------	--------------	----	-----	------	---------	---	---	----	------------------

D3535-25

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	34	
62233	1	
81357	1	
82156	2	
83387	17	
<u>83899</u>	13	<i>X1</i>

D3794-1	Manufactured	No	230	Each	26.0000	1	1	**	<i>MU 110211</i>
---------	--------------	----	-----	------	---------	---	---	----	------------------

D3794-1

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	6	
82167	6	
FP002	20	
<u>83395</u>	20	<i>Y1</i>

MS21043-6	Purchased	No	230	Each	618.0000	4	4	**	<i>MU 110210</i>
-----------	-----------	----	-----	------	----------	---	---	----	------------------

MS21043-6

NUT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	20	
103693	20	
ST301	598	
117887	2	
<u>118384</u>	96	<i>Y4</i>
120308	500	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B				Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

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Page 13

Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No 250 Each 127.0000 2 2 ✓ JB

**

D3493-1

Washer

Location	Loc Qty	Loc Code
ST050	127	
77573	1	
82023	26	
83097	100	83097

MS2108C8

Purchased No 250 Each 81.0000 2 2 ✓

**

MS2108C8

NUT

Location	Loc Qty	Loc Code
304	75	
121185	29	
121349	46	121349
FP002	1	
115884	1	
ST303	4	
115884	0	
118077	1	
119309	2	
119638	1	
ST304	1	
121524	1	

AN8C21A

Purchased No 250 Each 57.0000 2 2 ✓ JB

**

AN8C21A

BOLT

Location	Loc Qty	Loc Code
ST343	57	
118758	3	
121167	4	
121275	50	121275

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 14

Work Order ID: 85139

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

85139
D350-636-011

Start Date: 04/06/2012

Required Date: 18/06/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

146.0000

4

4

**

41 110711

*NAS1515H3I *

WASHER

Location	Loc Qty	Loc Code
FG	40	
102472	40	
ST277	106	
118686	3	
<u>119438</u>	1	XU
120360	11	
121243	2	
121556	89	

D2741

Manufactured

No

250

Each

20.0000

1

1

**

83135 JB C

S*D2741*

Blade, 350 Skidtube

Location	Loc Qty	Loc Code
ST	-10	
ST466	30	
71856	1	
79516	19	

D3532-1

Manufactured

No

250

Each

7.0000

2

2

**

83319 JB 12/07/24 C

S*D3532-1*

Spacer

Location	Loc Qty	Loc Code
ST053	7	
82041	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
1		1		D2750-3	SKIDTUBE WELDMENT, LH
		1		D2750-4	SKIDTUBE WELDMENT, RH
1	1			D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
	4	4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
	8	8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3635-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

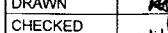
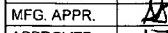
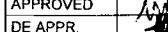
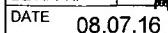
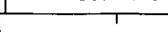
GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005.4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHIE (REF. 4.3.5.1) PER DART QSI 005.4.3
- BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005.4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL 
SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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12106/04

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(6/29/22 14:14)

F	INCORPORATE DS1 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3536-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3794-1 (ZN G8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE OTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-B, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF: NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
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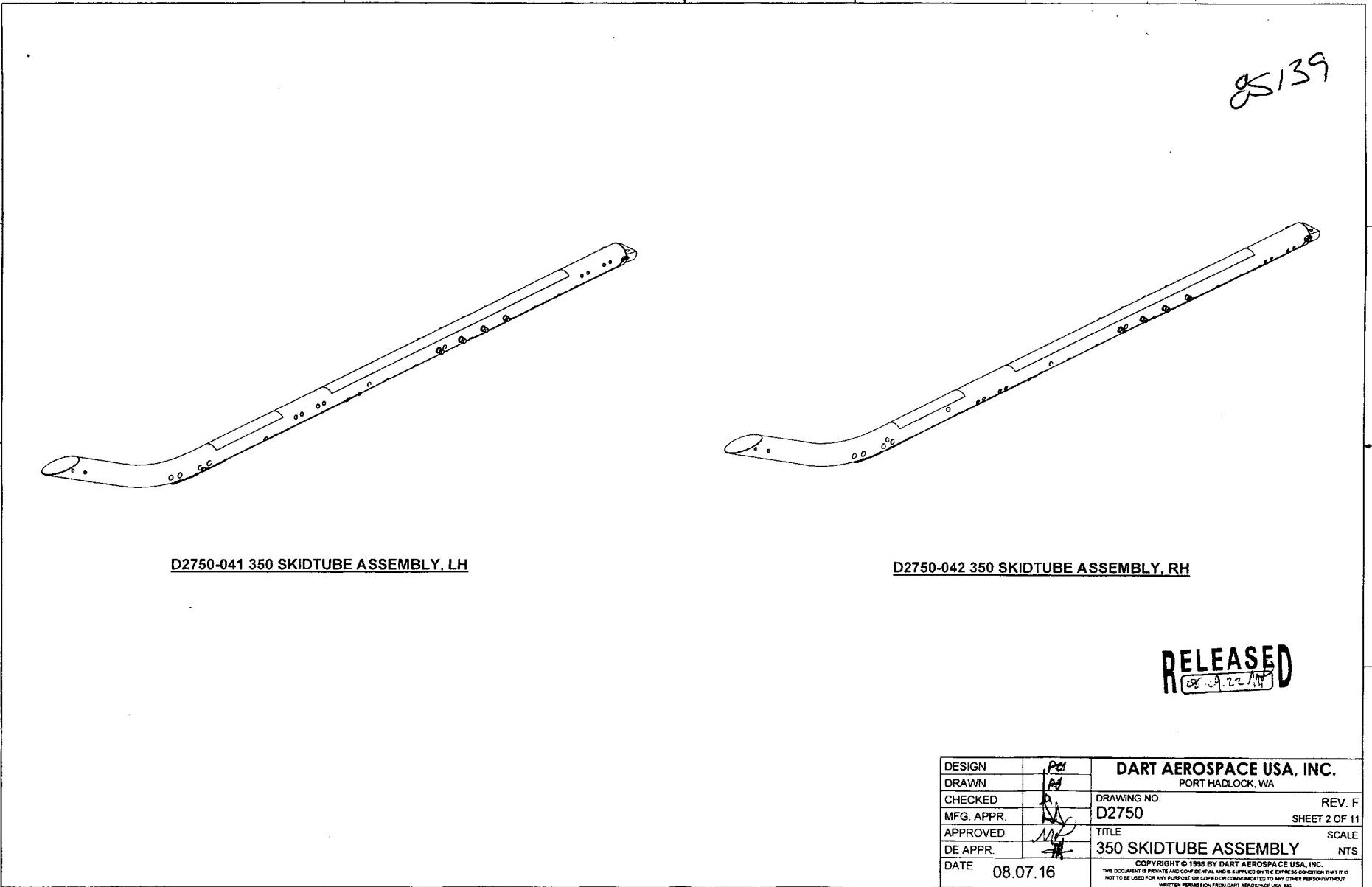
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8 7 6 5 4 3 2 1

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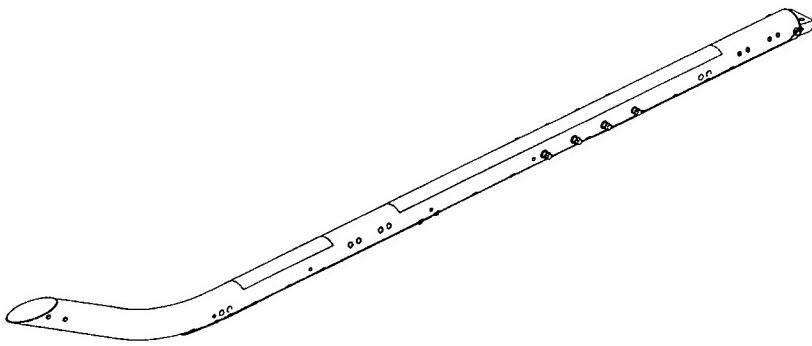
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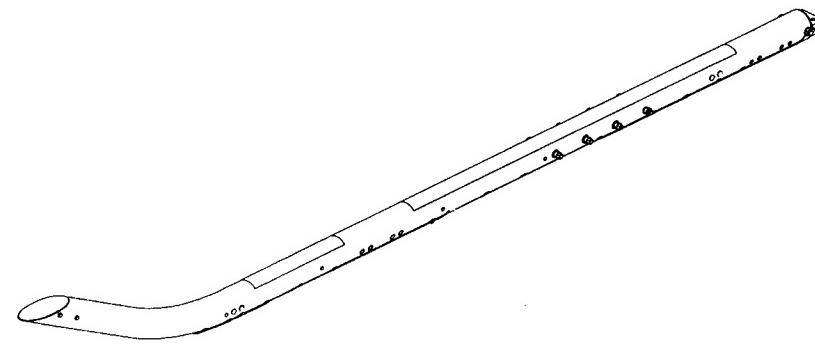
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A



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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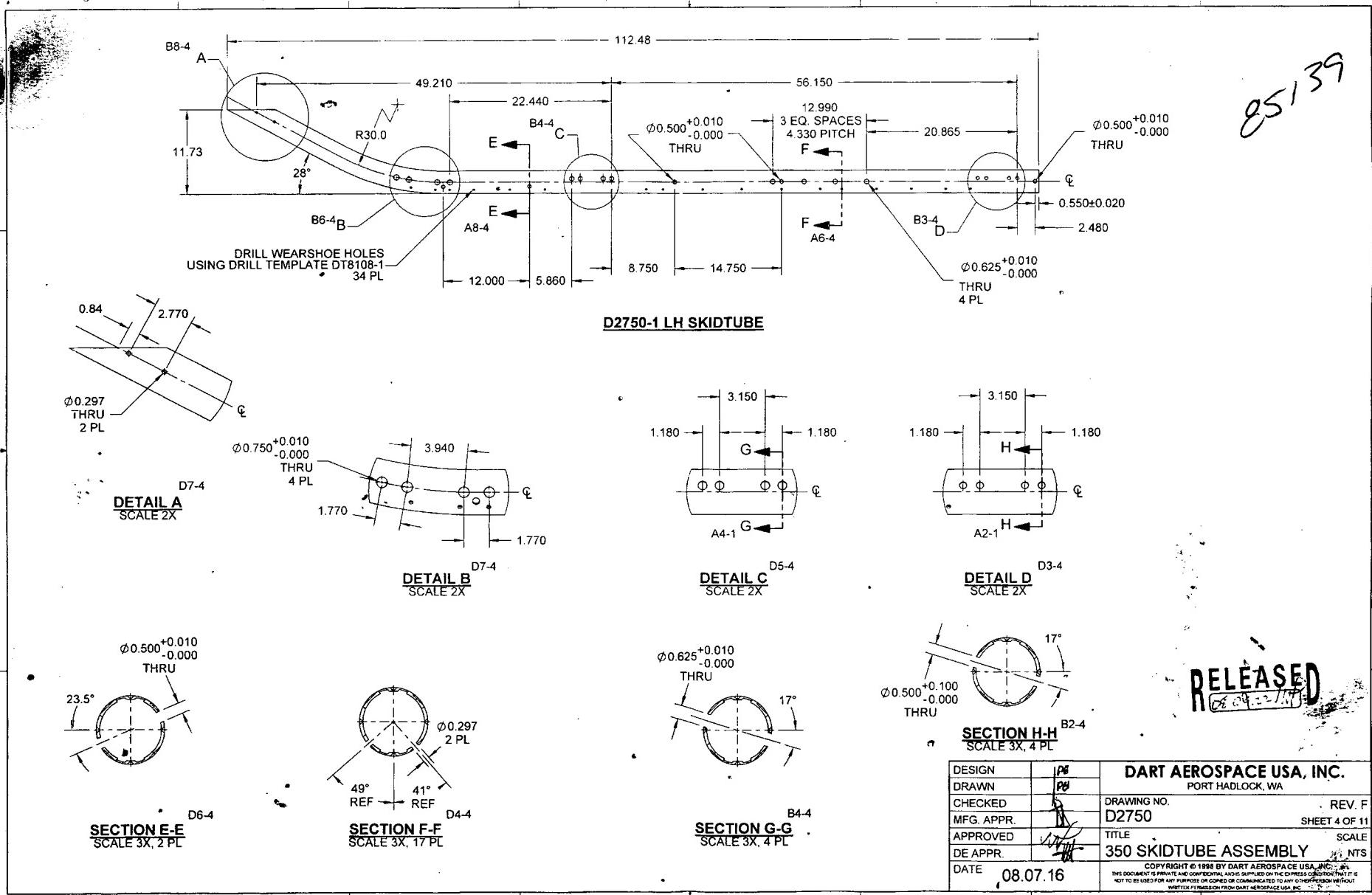
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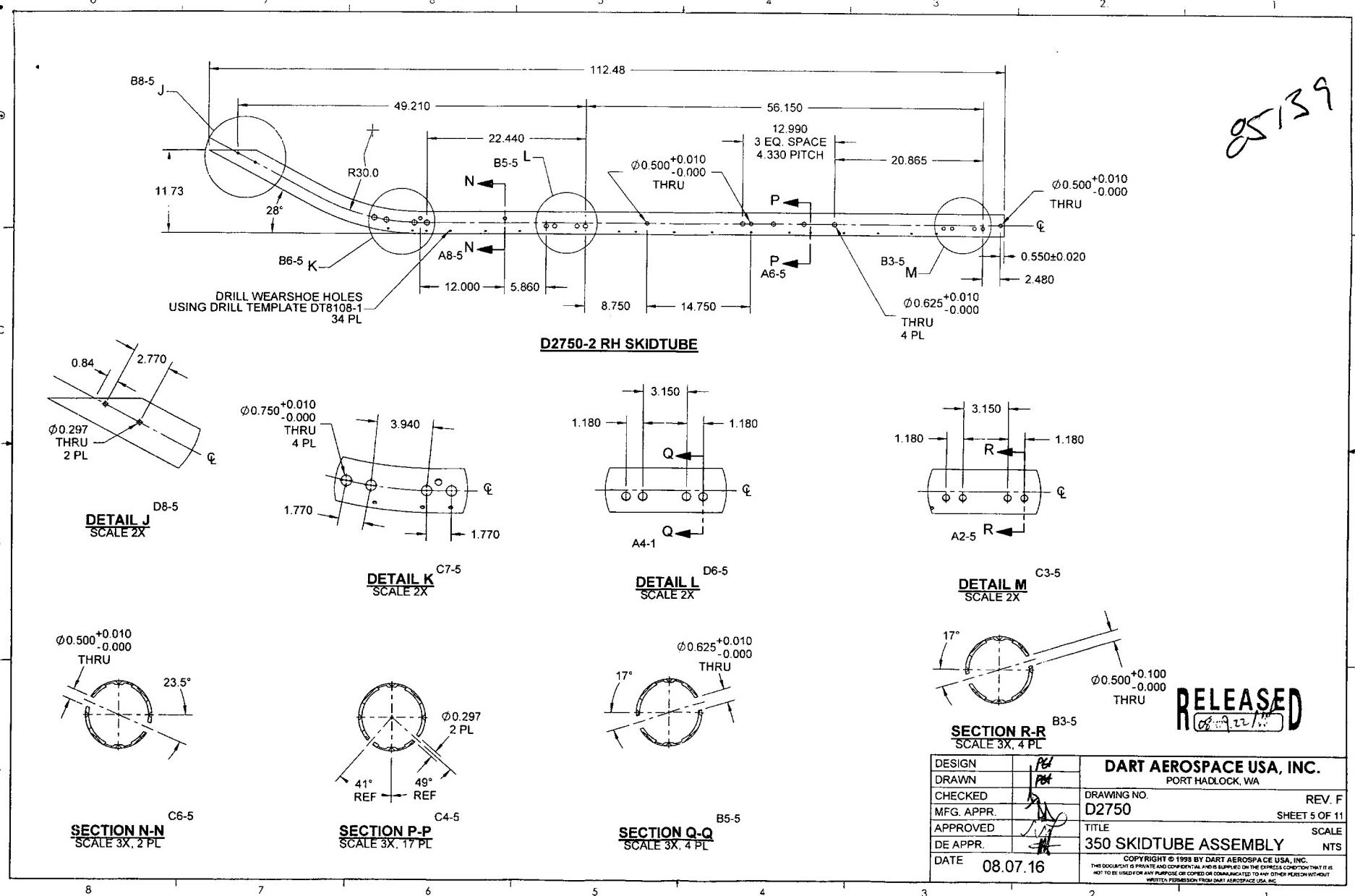
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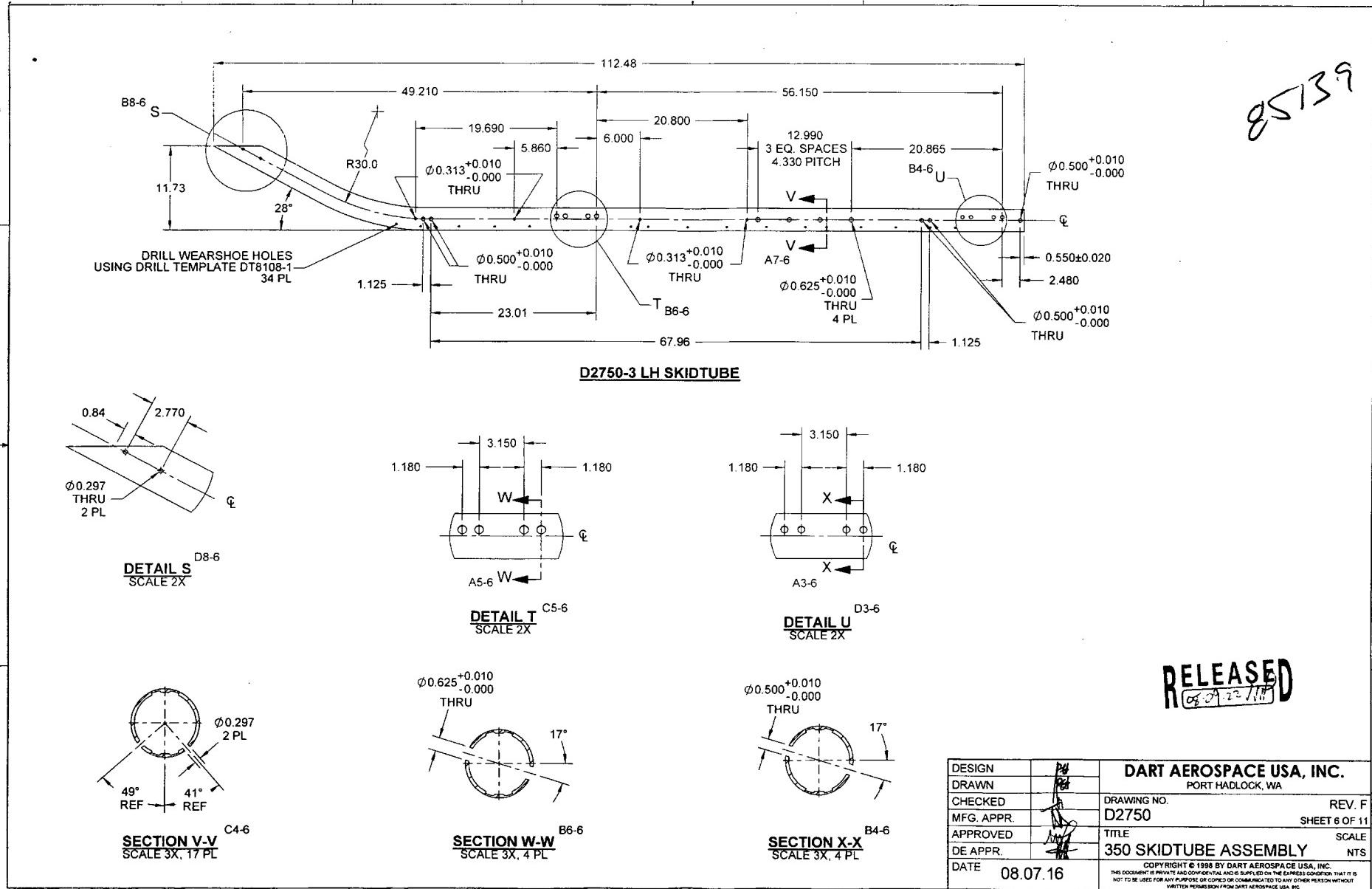
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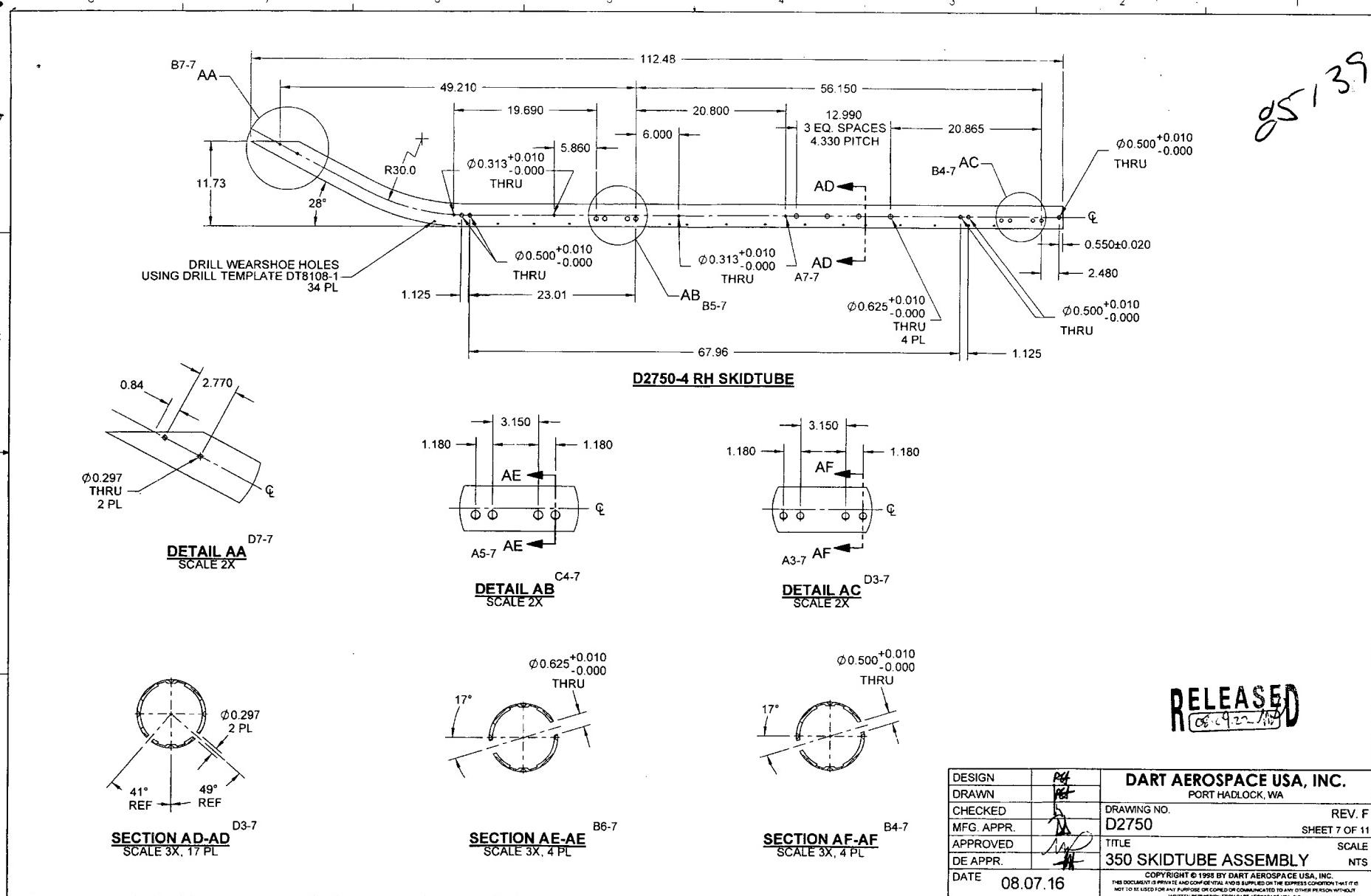
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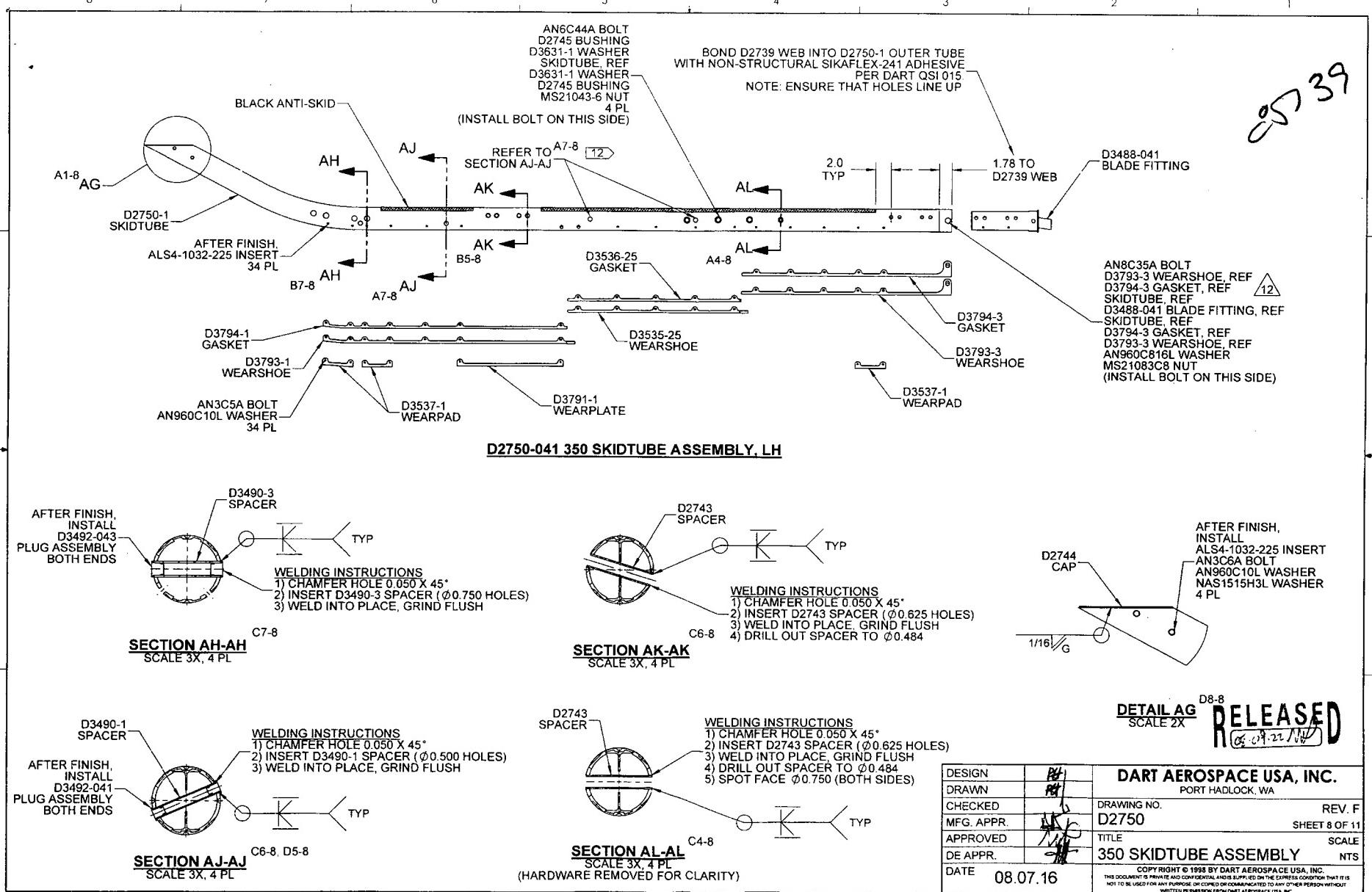
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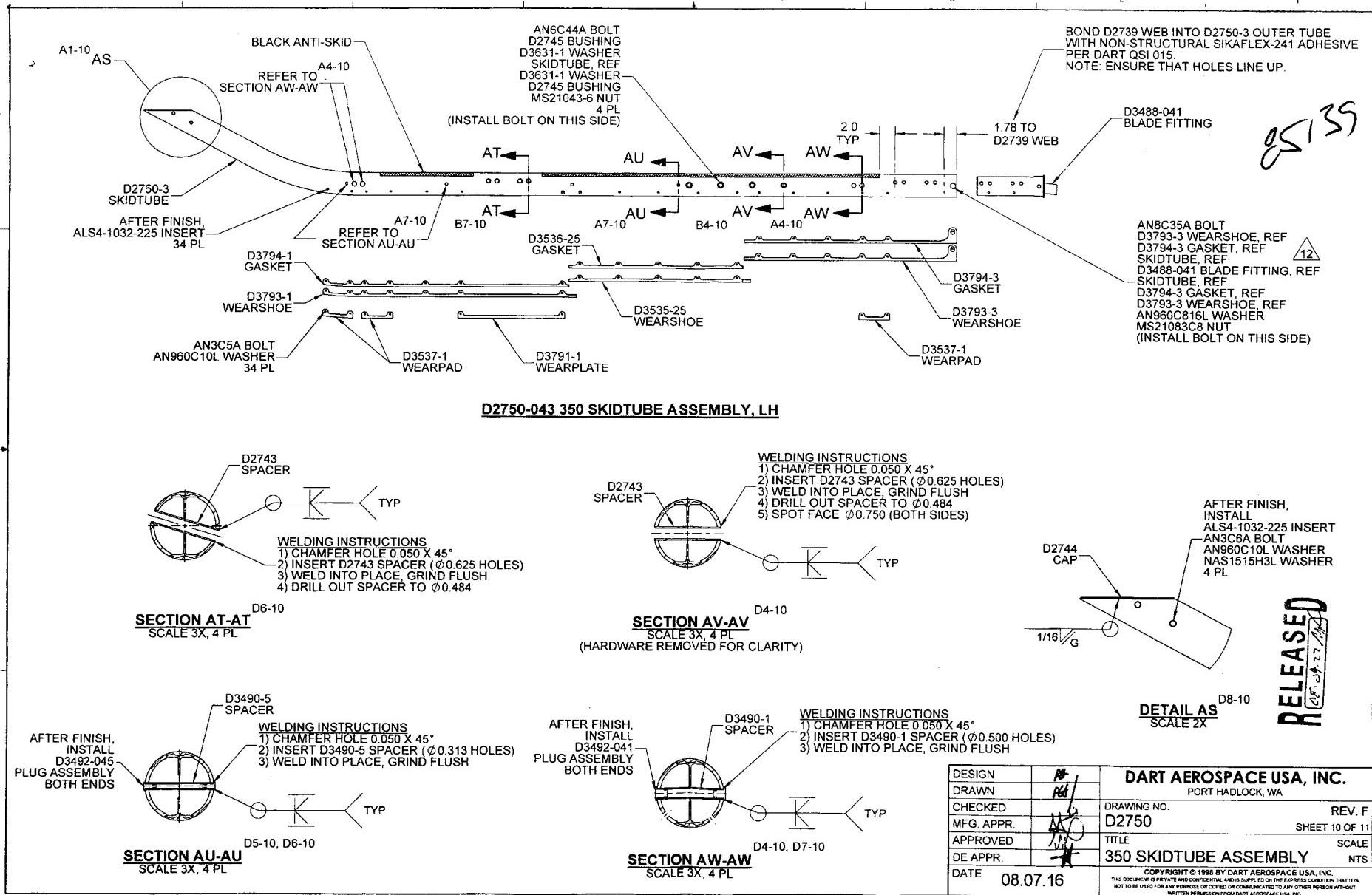
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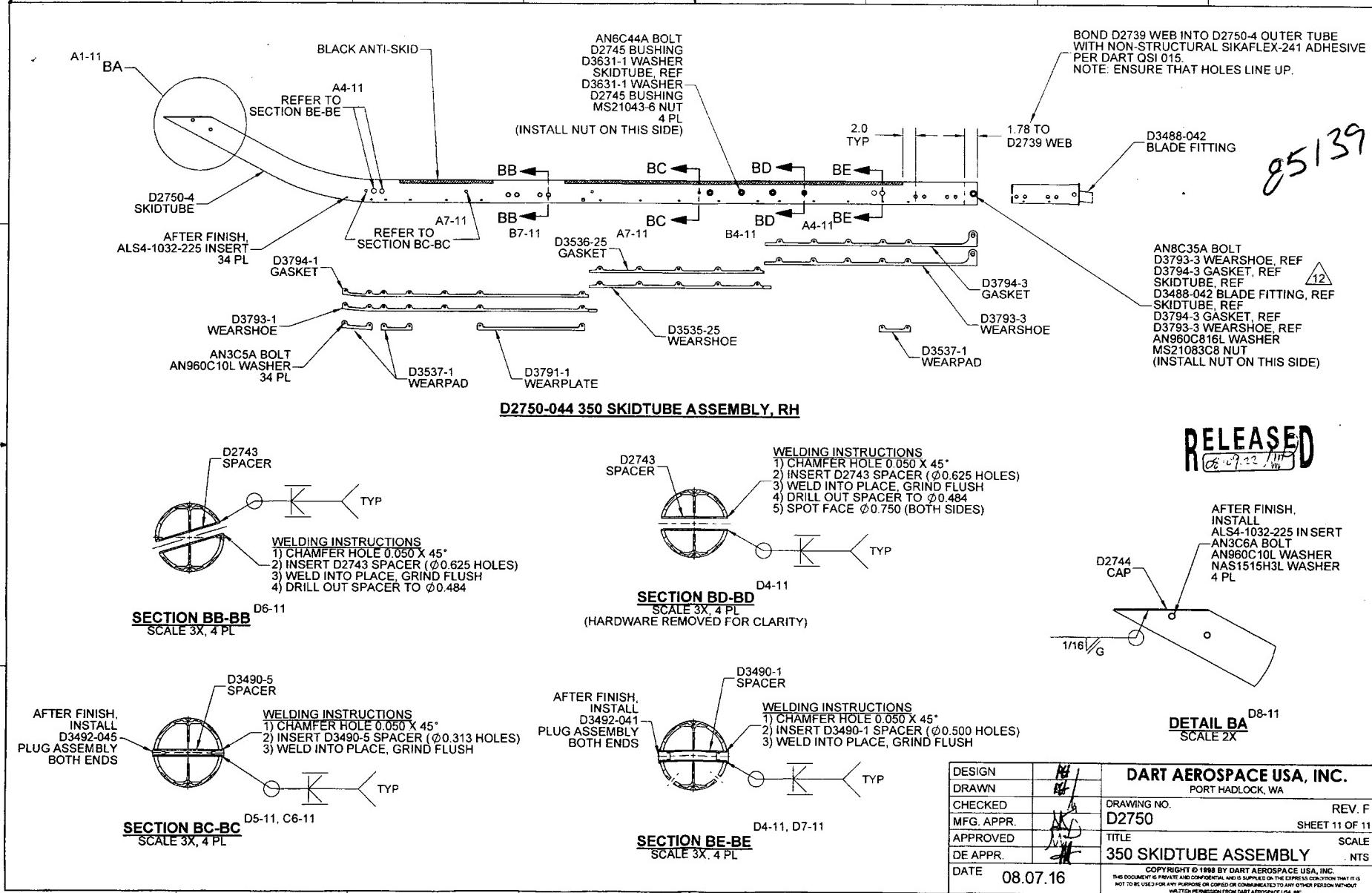
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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NO. 294

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 83800
Part number: A350-636-012
Description: Skidtube
Welding Process: Tig[] Mig[]
Base materiel: Alum.
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier David Ainsal Date of Test Coupon 2.05.09

Welder Barclay Elliott Date of Test Coupon 12.05.09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld